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No. 6

HONOR FOR DR. KNIGHT

Dr. Knight has just returned from a trip to the Northwest bringing back with him from his Alma Mater, the University of Washington, the honor Alumnus Summa Laude Dignatus. This distinction was conferred on him after his selection by a committee appointed by President Newman H. Clark of the University and the Board of Trustees of the Alumni Association. The plan of conferring the honor on distinguished graduates was started last year and Dr. Knight is the second to receive it. He was graduated from the University in 1902 and received his Master's degree in 1904, the first Master's degree in chemistry to be granted by that institution.

The award - Alumnus Summa Laude Dignatus - according to an article published in The Washington Alumnus, "is not based upon work during the preceding year but rather on the all-time record" of the man. It is described as the University's highest award.

On receiving the honor at the annual Reunion Banquet of the Alumni Association, June 10, Dr. Knight gave an address on Research and Human Welfare.

At Seattle, on June 13, Dr. Knight addressed the Washington State Press Club on How Research Has Helped the Northwest. On the fifteenth over Station KJR at Seattle, he discussed briefly the four Regional Research Laboratories. On the sixteenth he talked before the community council of the Seattle Chamber of Commerce on the Commerce of the Northwest.

On his way back to Washington (D. C.) Dr. Knight attended the annual meeting of the American Society of Agricultural Engineers at St. Paul, Minn. He addressed the meeting June 20 on The Engineer and the Chemist in Agriculture, emphasizing the close relationship of the work in agricultural engineering and agricultural chemistry and discussing the formation of the new Bureau of Agricultural Chemistry and Engineering and its four regional research laboratories. This bureau, he said "will devote its energies primarily to the problems of efficient utilization

of the products of the soil and our fertilizer resources. It will have on its staff chemists, physicists, engineers, architects, engineering chemists and bio-chemists, and other scientists whose knowledge may be of value in working out problems in this rather broad field. This bureau is also charged with carrying on fundamental research in the two fields of chemistry and engineering, as they may apply to problems of agriculture. In other words there is a functional type of organization backed up by a reservoir of fundamental knowledge and research which the bureau will attempt to husband and increase at the same time it pushes ahead with the strictly functional activities."

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- 2 TWENTY FIVE YEARS OF SERVICE 2
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The middle of June was the quarter-century mark in Ralph Wiley Frey's service with the Bureau of Chemistry and Soils and its predecessors in the Department of Agriculture. Mr. Frey, now senior chemist in the Industrial Farm Products Research Division, entered the department January 16, 1914, as an assistant chemist under Dr. F. P. Veitch, then in charge of the Leather and Paper Laboratory of the old Bureau of Chemistry, and has served continuously through various reorganizations except for five months when he was chemist for a manufacturer of commercial tanning extracts. Since 1918 he has been in charge of the investigational work on hides, skins, tanning materials and leather, which is now a section in the Industrial-Farm Products Research Division.

Born in the District of Columbia, Mr. Frey got his schooling in the Washington public schools, graduating from George Washington University with a B. S. degree in 1912.

From the first Mr. Frey manifested a high order of scientific ability, capacity to plan, execute and direct important fundamental and practical work and to present its results in an orderly, lucid and convincing manner. The work performed under his leadership has become known throughout the leather world, both scientific and industrial.

Only a few of his many accomplishments can be mentioned. He is responsible for the writing of a Farmers' Bulletin on the skinning, curing and marketing of country hides and skins which has had a tremendous circulation and has been translated into Spanish for use in South American countries. In the field of fundamental and technical research, he has conducted outstanding experiments and studies which proved that atmospheric pollution is the determining factor in the deterioration of bookbinding leathers. Through his efforts a gas chamber has been developed and standardized for the rapid testing of bookbinding and upholstery leathers under conditions comparable to actual use. His studies, indi-

cating that chrome or combination vegetable-chrome tanned leathers are more resistant to atmospheric pollution than straight vegetable tanned leathers, have been responsible for the displacement by chrome tanned leathers of straight vegetable tanned leathers used heretofore for bindings by the Government Printing Office. He has made notable contributions to the prevention of deterioration of hides and skins through improved methods of curing and directed C. C. Smoot's survey and experimental work which demonstrated the practicability of using waste bark from Western Hemlock for the manufacture of tanning extracts.

A comparatively new field of extensive investigations has recently been opened by Mr. Frey to show the effect of animal life factors, such as breed, age, sex, feed, and environment upon the quality of hides and skins and the leathers made therefrom.

Mr. Frey is author or co-author of nearly 100 papers and bulletins, including 25 Department publications. Many of his writings have appeared in technical journals, notably the Journal of the American Leather Chemists' Association, the Britannica, and the Yearbook of the Department. He has been an active member of the American Leather Chemists' Association for approximately twenty years, having served on various committees, as a member of the Council, and as its President.

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Short articles on employees of twenty-five or more years of service in the bureau may be sent to the editorial office.

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: Oliver B. Clevenger :
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Oliver B. Clevenger, Secretary to the Assistant to the Chief of the Bureau of Chemistry and Soils, died May 27 after an illness of only a few days. With characteristic devotion to duties, Mr. Clevenger was at his desk on Monday, May 22, although he had not been feeling well for the two or three days preceding.

Entering the service of the Bureau, in what was then the Bureau of Soils, January 19, 1906, Mr. Clevenger continued in its service without interruption until his death.

He was born in Pennsylvania, but spent his boyhood in and around Asheville, North Carolina. He attended Dickinson College, Carlyle, Pa., and later was graduated from the dental school of Georgetown University, Washington, D. C.

Mr. Clevenger was a man of real culture with a genuine interest in art and literature. He was well read and well informed. His long experience in the Department gave him a comprehensive knowledge of its

development. An outstanding quality of his character was his sympathy and consideration for others. The problems and the difficulties of his friends became his own. He was generous and kind, and never wavered in his loyalties.

Mr. Clevenger will be missed by all his friends, and it may safely be said that all who knew him were his friends.

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REGIONAL RESEARCH LABORATORIES

On May 23, 1939, the Department of Agriculture announced the award, to the W. E. O'Neil Construction Co. of Chicago, Ill. of the contract to erect the Northern Regional Research Laboratory building in Peoria, Ill. This contract calls for the completion in 365 calendar days of the entire administration unit, together with 12 sections of the chemical laboratory wing and the entire service building and power plant, for the amount of \$885,000.

The Sordoni Construction Co. of Wilkes Barre, Pa., was awarded the contract to construct the Eastern Regional Research Laboratory building at Wyndmoor, Pa., the Department announced on May 25. This contract calls for the completion in 370 calendar days of the entire administration unit, together with 9 sections of the chemical laboratory wing and the entire service building and power plant, for the amount of \$842,000.

On May 27 the contract to erect the Southern Regional Research Laboratory building at New Orleans, La., was awarded to the A. J. Rife Construction Co. of Dallas, Texas. This contract calls for the completion in 400 calendar days of the entire administration unit and the chemical laboratory wing for the amount of \$843,000.

The Department awarded to the McDonald and Kahn Co., Ltd. of San Francisco, Calif., on May 31, 1939, the contract to erect the Western Regional Research Laboratory building at Albany, Calif. This contract calls for the completion in 365 calendar days of the entire administration unit, the chemical laboratory wing, and the entire service building and power plant for the amount of \$817,000.

A brief ceremony was held at the site of the Northern Regional Research Laboratory in Peoria, Ill. at 4:00 p.m. on Thursday, June 8, 1939, marking the turning of the first shovelful of soil in the excavation for the new laboratory building. The program was arranged by officials of the Peoria Association of Commerce, with L. J. Fletcher, President of the Association, acting as master of ceremonies. Remarks were made by representatives of the Bradley Polytechnic Institute, which donated the land, the City of Peoria, the Association of Commerce, and by Dr. O. E. May, Director of the Laboratory, and H. T. Herrick, of the Bureau of Chemistry and Soils. The program was broadcast by the local radio station, and an Association of Commerce dinner was held in the evening.

Following their participation in the ground-breaking ceremony at Peoria, Dr. May and Mr. Herrick visited the Regional Soybean Industrial Products Laboratory at Urbana, Ill., and also held conferences in Chicago, Ill., and Minneapolis, Minn.

A. P. Aanestad, Business Manager of the Western Regional Research Laboratory at Berkeley, Calif., is in Washington assisting with the end-of-the-fiscal year affairs of the Bureau.

The Ph. D. Degree was conferred upon P. A. Wells by Georgetown University on Monday evening, June 5, 1939. Dr. Wells was awarded the B. S. Degree in 1928 by the University of Minnesota, and the M. A. Degree in 1932 by George Washington University.

Between May 7 and May 17, W. B. Van Arsdel of the Washington office visited the Northern Regional Research Laboratory headquarters at Peoria, Ill., the Regional Soybean Industrial Products Laboratory at Urbana, Ill., and attended the American Institute of Chemical Engineers meeting at Akron, Ohio.

H. T. Herrick addressed the American Leather Chemists Association at Shawnee-on-Delaware, Pa., on June 5, on the subject of "The New Regional Research Laboratories of the United States Department of Agriculture."

Dr. T. L. Swenson returned on May 15 from a trip to Seattle, Wash., Corvallis, Oreg., Berkeley, Calif., and Ogden, Utah, where he conferred with persons interested in the development of the program of the Western Regional Research Laboratory.

H. T. Herrick and Dr. P. A. Wells returned on May 29 from a trip to various points in the States of Connecticut and New York, where conferences were held with officials of the State Experiment Stations and others concerning the program of the Eastern Laboratory. They were joined in New York City on May 24 by Director O. E. May of the Northern Laboratory.

Dr. T. L. Swenson was recently elected a member of the Cosmos Club of Washington.

D. F. J. Lynch, Director, and Dr. W. Kyle Ward, Senior Chemist of the Southern Regional Research Laboratory, were in New York City on June 7, conferring with members of the Boyce-Thompson Institute concerning the proposed cotton research work of the Southern Laboratory.

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DIVISION OF MECHANICAL EQUIPMENT

R. B. Gray left Washington on June 11 to inspect the Division work in progress on tillage machinery at Auburn, Ala., sweetpotato production machinery at Laurel, Miss., corn production machinery at Ames, Iowa, and insect control machinery at Toledo, Ohio. At Kansas City Mr. Gray conferred with the representatives of several implement manufacturers and inspected the most recent models of agricultural machines. He also attended the annual meeting of the American Society of Agricultural Engineers at St. Paul, Minn., June 19 to 22.

E. M. Mervine and S. W. McBirney attended a meeting of the United States Sugar Beet Association Executive Committee at Davis, Calif. on May 26 and 27, in connection with the cooperative sugar beet machinery investigations. Both Mr. Mervine and Mr. McBirney reported on the Bureau activities on sugar-beet machinery developments, particularly with regard to single-seed-ball planters. Considerable attention throughout the sugar beet areas has been given to this planter work which may result in vital changes in the method of raising beets. Various equipment under development by both the Bureau and the California Station was exhibited and demonstrated. The Sugar Beet Association voted continued financial support of the project in cooperation with the California and Colorado experiment stations.

In connection with grasshopper control equipment Frank Irons is making an extensive field trip in South Dakota, North Dakota, Montana, Wyoming, Colorado, New Mexico, and Texas. Attention is being given particularly to bait mixers and spreaders. A large number of bait spreaders of a type designed by the Bureau are now in use. Mr. Irons first conferred, at Minneapolis, with R. L. Shotwell in charge of the grasshopper population surveys.

G. A. Cumings attended the Canners Field Day and inspected the co-operative fertilizer placement experiment with cannery peas at the Maryland Field Station, Ridgely, Md., on June 1. Mr. Cumings also inspected cooperative experiments with peas, and conferred with experiment station representatives in Ohio and Michigan during the week of June 5. Side placement of the fertilizer is superior to other methods of application used with these crops as indicated by the number and growth of the plants.

L. G. Schoenleber and W. H. Redit have recently supervised planting operations in various fertilizer placement experiments with tomatoes, sweetpotatoes, tobacco, peanuts and cabbage in New York, Maryland, Delaware, Virginia, and North Carolina. A cooperative study with peanuts was started at Holland, Va., this season on account of injurious effects of fertilizer experienced in the area, particularly when low grade potash salts were used in the mixture, and the fertilizer was applied either directly under or over the seed.

The following report on cooperative fertilizer placement studies has been issued:

Parker, M. M., and Cumings, G. A., "Placement of Fertilizer for Henderson Bush Lima Beans in Virginia." Virginia Truck Experiment Station Quarterly, Bulletin No. 99, pp. 1559-1578.

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FOOD RESEARCH DIVISION

A special invitation was received by Dr. F. C. Blanck, Chief of the Food Research Division, to address a meeting of the Pennsylvania Division of Appalachian Apples at Hershey, Pa., on June 10. He discussed informally apple by-products and frozen foods.

On June 5-6 H. H. Hall attended The Sugar Processors' Annual Meeting at Detroit, Mich., sponsored by the Farmers' and Manufacturers' Beet Sugar Association, and made an informal address on quality control in the manufacture of sugar. En route to Detroit from Washington, D. C., Mr. Hall visited factories of The Great Lakes Sugar Company at Fremont, Ohio, and Blissfield, Mich. Before returning he will do research work in the plant of the Omaha Cold Storage Co., at Omaha, Nebr., on the bacteriology of egg white drying. He will also make visits to the Michigan Sugar Co., and the Michigan State College and State Agriculture Department at Lansing.

Dr. L. F. Martin and E. F. Jansen drove to Rehoboth Beach, Del. to attend the Johns Hopkins Research Conference, held on June 5-9.

A short visit to Pittsburgh, Pa., was made on June 15, by Dr. M. B. Matlack, to confer with Professor C. G. King of the University of Pittsburgh relative to cooperative work on enzyme problems. He will also discuss this subject with officials of the Heinz Company.

The Frosted Foods Institute, held on June 9, at San Francisco, Calif., was attended by Messrs. E. M. Chace and D. G. Sorber of the Fruit and Vegetable Chemistry Laboratory at Los Angeles, and Mr. H. C. Diehl of the Division's Frozen Pack Laboratory at Seattle. Messrs Chace and Sorber gave informal discussions on frozen pack investigations.

On June 5 Dr. H. H. Mottern received his Ph.D. degree from the State College of Washington at Pullman; his thesis was entitled "The Preparation of Galacturonic and Mucic Acids from Pectic Substances." Dr. Mottern has been associated with the Food Research Division for the past ten years and is in charge of the U. S. Fruit and Vegetable By-Products Laboratory at Pullman.

J. L. Heid, in charge of the Fruit and Vegetable Products Laboratory, at Weslaco, Texas, was invited to address the North Texas State Teachers' College short course at Denton, Texas, on June 23-24, on the utilization of south Texas fruits and vegetables.

Dr. F. C. Blanck and Dr. Harry E. Goresline visited the field station of the Food Research Division at Raleigh, N.C. where the Bureau and the State Agricultural Experiment Station are carrying on investigations with pickles. Side trips were made to Rocky Mount and Faison, N.C., to inspect field studies on the pickle situation.

An informal address on "The Fermentation of Carbohydrates by Strains of Industrial Yeasts", was made by E. A. Beavens, of the Geneva, N.Y., station of the Food Research Division, before a meeting of the Western New York Branch of the Society of American Bacteriologists, held during the latter part of May at Strong Memorial Hospital, Rochester, N.Y.

Dr. H. E. Goresline has been appointed an official delegate from the United States and Chairman of the American delegation to attend the Sixth International Technical and Chemical Congress of Agricultural Industrial meeting at Budapest, July 10 to 20. He will deliver a paper entitled "Preparation and Bacteriological Examination of Fruit Juices." He will also present a paper by Mr. H. T. Herrick on "Utilization and New Sources of Cellulose of Nonforest Origin", and one by Dr. A. K. Balls on "Studies on the Commercial Production of Bromelin".

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ALLERGEN INVESTIGATIONS

Dr. Charles Sutherland, allergist of Melbourne, Australia, visited the laboratories of Allergen Investigations on June 13.

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CHEMICAL ENGINEERING RESEARCH DIVISION

Dr. David J. Price addressed the Dauphin County Volunteer Firemen's Association at the annual convention in Elizabethville, Pa., on June 9, his subject being "Dust Explosion Hazards During Fire-Fighting Operations". The meeting was attended by a large number of Pennsylvania State officials, including Fire Marshal W. F. Traeger and representatives of the Department of Public Instruction. On the same day Dr. Price attended conferences in Harrisburg, Pa., on June 9 with Pennsylvania State officials regarding plans for the first Firemen's Training Conference at Pennsylvania State College to be held August 27 to September 1. Pennsylvania has approximately 160,000 volunteer and rural firemen comprising more than 1700 companies.

On June 12 Dr. Price delivered an address on "Research on Explosion and Fire Prevention as Related to the Fire Service," at the Annual Convention of the Missouri Valley Fire Chiefs' Association at Kansas City, Mo. Special reference was made to the fire-fighting problems encountered by the Chicago Fire Department in fighting the fire following the disastrous dust explosion in the Rosenbaum Brothers grain elevators in Chicago on May 11.

At the request of Professor L. H. Provine of the University of Illinois Dr. Price participated in the program for the Illinois Fire College at Urbana, Ill., June 15. He lectured on "Developments in Farm

and Rural Community Fire Prevention," and took charge of the round table discussion dealing with farm and rural safety matters. The State of Illinois has been one of the pioneers in firemen's training schools and celebrated the 15th anniversary of the State Fire College this year.

On June 13 Dr. Price and Hylton R. Brown resumed the investigation of the Rosenbaum Brothers grain elevator explosion in Chicago. The completion of salvage operations made possible detailed studies of the circumstances under which the explosion occurred. The rapid expansion of truck transportation of grain to the Chicago terminal grain elevators has developed new problems related to grain-handling and dust explosion prevention. The explosion has created nation-wide interest, and the Bureau has received many inquiries for information as to its cause. A report of the investigation is now in course of preparation.

Immediately following the recent explosion in a school at Barberton, Ohio, Chief Claude Witwer of the fire department advised Dr. Price by telephone regarding the results of his investigation. Chief Witwer stated that the explosion occurred while approximately 100 pupils and teachers were in the frame residence which was being used for school purposes during the construction of the new building. An accumulation of gas due to a leak in the main supply line was ignited by flames while waste paper was being burned in the basement. Apparently little fire followed the explosion. Although the building was completely wrecked, the pupils escaped without very serious injuries. More than fifty persons were taken to hospitals, many of them with painful injuries. This explosion recalled the explosion in the New London, Texas, school in March 1937, in which 293 lives were lost, and in which investigation the Chemical Engineering Research Division cooperated at the request of Governor Allred of Texas. The report of the New London disaster was published as Senate Document No. 56.

Dr. Price attended the annual Convention of the Six-County Firemen's Association at Hazelton, Pa., on June 20 and delivered an address on "Explosions and Fires Caused by Water." The sound film, "Dangerous Dusts," was shown and the address was accompanied with special dust explosion demonstrations.

The annual encampment of the 4-H Clubs in Washington was brought to a conclusion by a visit to Arlington Farm, including the Division's dust explosion testing station. A number of demonstrations of dust explosions were given for the boys and girls.

Harry E. Roethe recently revisited a number of selected farms on the Eastern Shore of Maryland to make final observations on the condition of hay stored with known moisture content during the 1938 haying season. These and previous observations in the field apparently confirm the findings of the Bureau's experiments at Beltsville, Md., that the moisture range for the safe storage of unchopped alfalfa hay, consistent with the production of good quality hay, is 25 to 30 percent, while that

for chopped alfalfa hay is 20 to 25 percent, depending upon the length of cut. Unless the chopped hay is unusually well cured, a cut of approximately 2 inches is desirable rather than the customary cut of 3/4 inch or 1 inch. It also appears that unchopped red clover hay can be stored safely with a moisture content somewhat higher than that for unchopped alfalfa hay.

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PROTEIN AND NUTRITION RESEARCH DIVISION

Dr. Treat B. Johnson, well-known Professor of Organic Chemistry, Yale University, recently visited this Division in connection with a research problem dealing with proteins and amino acids.

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COTTON GINNING INVESTIGATIONS

The Cotton Ginning Laboratories at Stoneville, Miss. are pushing machinery installation and reorganization work in preparation for experimental work during the coming cotton ginning season. Latest model cotton gins have now been received from four of the six manufacturers, and a completely new direct gas-fired heater with stream lined wye system has been installed for use with the Government design vertical drier.

Many visitors have been received at the Laboratories recently, including Dr. Di Fu Yu of the Chinese Embassy at Washington; Dr. Shields of the Bureau of Entomology & Plant Quarantine, Washington; Harry Maxon, manufacturer, of Muncie, Ind.; and J. D. Hannah, Farm Security Administration, Little Rock, Ark.

With the exception of the Arkansas-Missouri Giners' Association, the annual meetings of the State cotton ginners of the South have been concluded. Members of the Laboratories' staff from this Bureau took part in several of the programs.

A separate experimental laboratory has been completed adjacent to the Ginning Laboratory for further investigations into mechanical sampling of cotton bales during ginning, a method which will become vitally necessary if a net weight packaging program is adopted by the Federal Government. Geo. E. Gaus, under the direction of Dr. John W. Wright of the Bureau of Agricultural Economics, is heading this work jointly with the engineers of this Bureau.

The roller ginning laboratory for testing Sea Island cottons is now almost completed and will be operated under the direction of this Bureau with the assistance of J. S. Townsend of the Bureau of Plant Industry.

There has been material progress in the cotton packaging and pressing laboratories. A 12-roll round bale press, loaned to the Bureau through the courtesy of Anderson-Clayton Co., is being installed under the direction of their engineers, C. A. Hooten and E. Lloyd Smith. The 400-pound Brazilian press for the project is now being unloaded and erected,

and the special design of press indicating apparatus by Waldo H. Kliever, Engineer-Physicist, is being rapidly developed.

Dr. Mogford from the Texas A & M College visited the Cotton Ginning Laboratories en route to Europe with his three student winners of the trip, Messrs. H. F. Goodloe, J. D. Aughtry, Jr., and R. V. McNiece.

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DIVISION OF STRUCTURES

J. R. Dodge has returned from Athens, Ga., where he consulted with J. W. Simons and members of the staff at the University of Georgia, regarding the farmhouse research work. A bulletin is being prepared covering the Georgia investigations to date. Mr. Simons prepared a paper on the "Relation of Construction Factors to Comfort in Farmhouses", to be presented at the annual meeting of the American Home Economics Association at San Antonio, Texas.

B. M. Stahl inspected 131 bins of wheat in Ohio and Michigan during the last 2 weeks of May. With the exception of 1 bin of 1936 wheat and 12 bins of 1937 wheat, they contained wheat of the 1938 crop which had been stored under seal or had been found ineligible for loans because of high moisture, insect infestation, etc. Storages in this area are generally small, averaging about 250 bushels each, and located in barns or granaries. Insect infestation had been more prevalent than usual according to reports. Fumigation proved to be effective in most cases, although some applications for loans were refused where fumigation had not been successful.

Eight lots of wheat were found to be out of condition. These included the one lot of 1936 wheat, 5 of the 12 lots of 1937 wheat, and 2 of the 118 lots of 1938 wheat. Both of the latter had been rejected for loan because of high moisture (15.0 and 15.1 percent). Samples from these bins are being tested for germination and fat acidity so that a more accurate relation between deterioration and moisture content of wheat during storage may be found.

W. V. Hukill and M.A.R. Kelley from the Washington office and H. J. Barre from Ames, Iowa, attended the meeting of the American Society of Agricultural Engineers at St. Paul. Mr. Kelley presented a paper on Heat Production of Farm Livestock, and Dr. Barre one on applying the results of research. Mr. Dodge and Dr. Barre each prepared a short discussion for the Farm Structures Symposium. Dr. Barre, Mr. Kelley and Mr. Hukill also submitted reports as chairmen of technical committees.

J. R. McCalmont is at Beemerville, N.J., to install equipment and take readings in further studies of pressures developed by various kinds of silage. Hoops on one of the silos have been prestressed up to the full load they are expected to carry so that cracks will not open up after the structure has been filled.

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INDUSTRIAL-FARM PRODUCTS RESEARCH DIVISION

Messrs. R. W. Frey, J. S. Rogers, and I. D. Clarke, of the Hide and Leather Section, attended the annual meeting of the American Leather Chemists' Association at Shawnee-on-Delaware, Pa., June 5-8, 1939.

Dr. S. I. Aronovsky, Acting Chief of the Agricultural By-Products Laboratory, accompanied by Dr. R. P. Straka, also of the laboratory, visited the Forest Products Laboratory, Madison, Wis., May 18 to 20, and conferred with officials regarding the semi-pulping of cellulosic agricultural materials by biologic means. They also conferred with various officials of the University of Wisconsin.

H. L. Joachim, pulp manager of the Maui Agricultural Company, Hawaii, visited the Agricultural By-Products Laboratory on May 16 and 17, and conferred with Doctors Aronovsky, Whittemore, and Reid, and Mr. Dryden concerning the utilization of bagasse.

W. J. Gibbens, Engineer, of Valentine Sugars, New Orleans, La., visited the Agricultural By-Products Laboratory on May 22 and 23, in regard to the utilization of sugarcane bagasse for the production of plastics and pulps.

On May 29 the following representatives from the Central Fibre Products Co., of Tama, Iowa, visited the Agricultural Bu-Products Laboratory; H. T. Cherry, President; G. A. Bogle, Superintendent; Leonard Cherry; and Richard Sevick, Chemist. They conferred regarding the work on the production of kraft pulp from straws, and also in regard to the problem of slime control in their mill.

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Alan C. Higgs, of The Colonial Sugar Refining Co., Limited, Sydney, Australia, was a visitor at the Agricultural By-Products Laboratory on June 9. Mr. Higgs discussed with Dr. Aronovsky and other members of the staff the utilization of bagasse both for pulp and for plastics.

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NAVAL STORES RESEARCH DIVISION

Dr. T. C. Chadwick spent the period from May 22 to 27 at the plant of Swann and Co., Birmingham, Ala. assisting with the fractionation of turpentine and studying processes used in the Naval Stores producing plants. Dr. Chadwick stopped at the Naval Stores Station, Olustee, Fla., on his return trip to Washington.

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G. P. Shingler, in charge of the Naval Stores Station, Olustee, was in Washington from May 15 to June 1, discussing matters affecting the administration of the Naval Stores Station, and plans for the coming fiscal year.

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C. F. Speh visited the plant of S. D. Warren Co., Cumberland Mills, Maine, on May 29, and conferred with Mr. Edwin Sutermeister, Chief Chemist, on the use of rosin in paper sizing. Mr. Speh also visited a number of naval stores dealers and consumers in Boston and vicinity before returning to Washington.

J. O. Reed and W. C. Smith left Washington on June 6, en route to Savannah, Ga., to study turpentine conditioning. From Savannah they expect to proceed to the Naval Stores Station, Olustee, to assist in the gum fractionation experiments.

Dr. S. Palkin left Washington on June 10 to spend several days at the Naval Stores Station conducting experiments on gum fractionation. He also planned to visit Savannah, Ga., to confer with Dr. Torsten Hasselstrom, of the G-A Laboratories.

Publications

The Presence of Dihydroabietic Acid in Pine Oleoresin and Rosin. E. E. Fleck and S. Palkin. Jour. Am. Chem. Soc. 61, 1230, May 1939.

1938-39 Annual Naval Stores Report on Production, Distribution, Consumption and Stocks of Turpentine and Rosin (C. F. Speh) Mimeo. Cir. 57.

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FERTILIZER RESEARCH DIVISION

While on a recent visit to the University of North Carolina, June 3 to 7, Dr. R. O. E. Davis consulted with Dr. F. C. Cameron, formerly a member of this Bureau in the fertilizer work, and with Professor Baity on the subject of sewage sludge disposal problems.

On June 9 and 10, Dr. C. H. Kunsman, Chief of this Division, visited Pennsylvania State College and discussed the results of field tests and the use of granulated and ungranulated fertilizers on truck crops and related fertilizer problems with members of the Experiment Station. He also visited the U. S. Regional Pasture Research Laboratories at the College and saw their most interesting work on grasses as related to fertilizers and soil fertility. The use of chemical fertilizers in agricultural programs is receiving increasing attention as it is a vital factor in farm management.

Dr. Oliver R. Wulf delivered an informal talk on the subject of infra-red spectroscopy and the structure of organic compounds before the Johns Hopkins Research Conference, June 12-16, held at Rehoboth Beach, Del.

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CHANGES IN PERSONNEL

Recent Appointments (Indefinite or Probationary)

Paris N. Ballard	Jr. Laborer (Stoneville, Miss.)	Cotton Ginning
William A. Dennin	Architectural Draftsman	Structures
Eugene I. Eicher	Assistant Messenger (Peoria, Ill.)	Northern Reg. Res. Lab.
E. Elliott Gibbens	Agent (Hays, Kansas)	Structures
Robert A. Homan	" " "	"
Claude A. Hooten	Collaborator (Houston, Tex.)	Cotton Ginning
Leonard Liebling	Asst. Messenger	Administration
Frank J. Morris	Jr. Laborer (Stoneville, Miss.) (Part time)	Cotton Ginning
Richard E. Nest	Collaborator (Baltimore, Md.)	Structures
E. Lloyd Smith	" (Houston, Tex.)	Cotton Ginning
Dorothy E. Taylor	Under Scientific Helper (Los Angeles, Calif.)	Food Research Div.
Hugh E. Wilkinson	Machinist's Helper (Stoneville, Miss.)	Cotton Ginning

Recent Appointments (Temporary)

Mrs. Virginia Rand		
Beers	Junior Clerk-Typist	Food Research Div.
Grace E. Dygert	Junior Clerk-Stenographer	Bus. Admin. Div.
Ross W. Gates	Junior Laborer (Urbana, Ill.)	Ind. Farm Prods. Res.
Mrs. Marie C. Hair	Asst. Clerk-Stenographer	" " " "
Lucinda I. Tavenner	Asst. Clerk-Stenographer	Bus. Admin. Div.

Separations

Charles G. Badgett	Assistant Messenger	Administration
Muriel B. Blumberg	Minor Scientific Helper (Trans. to Commodity Exch. Admin.)	Food Research Div.
Dean Burk	Chemist (resigned).	Fert. Res. Div.
Lillian Church	Senior Clerk (deceased)	Mech. Equipment
Oliver B. Clevenger	Senior Clerk (deceased)	Bus. Admin. Div.
Jesse R. Cowand	Asst. Engineering Aide	Drainage
Mae Grahek	Junior Steno. (Albany, Calif.)	Western Reg. Res. Lab.
Joseph C. Dorsey	Minor Mechanic (Fireman)	Fert. Res. Div.
Warren E. Hall	Civil Engineer	Off. of Chief
Thomas A. Marsh	Agent (Blacksburg, Va.)	Structures
William M. McInnis	Tinner's Helper (Stoneville, Miss.)	Cotton Ginning
Ben D. Moses	Sr. Research Agr. Eng. (Davis, Calif.)	Rural Elec.
Cecil M. Pleasant	Jr. Laborer (Part time) (Stoneville, Miss.)	Cotton Ginning

George T. Kemler	Chief Structural Draftsman	Plans and Service
Warren B. Roodhouse	Agent (Urbana, Ill.)	Structures
Henry M. Shafer	Junior Laborer (Urbana, Ill.) (resigned)	Ind. Prods. Res.
Alvin G. Sharp	Principal Glassblower (Urbana, Ill.) (resigned)	" " "
Mrs. Ollie S. Sherby	Asst. Clerk-Steno (resigned)	" " "
Mabel C. Smith	Asstant Clerk	Office of Chief
Mrs. Mary B. Stein	Junior Steno. (New Orleans, La.)	Southern Reg. Res. Lab.
James F. Thompson	Asst. Mechanical Engineer	Plans and Service
Luther M. Winsor	Irrigation Engineer (Salt Lake City, Utah)	" " "

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